

CLAIMS

What is claimed is:

1. A method of assessing the effectiveness of a
5 therapeutic process or agent for treating schizophrenia or a
related neuropsychiatric disorder in a patient, comprising
the steps of:

(a) making an initial determination of the level of
phospholipid methylation in a tissue sample from a patient;

10 (b) administering to the patient the therapeutic
process or agent to be assessed;

(c) making a subsequent determination of the level of
phospholipid methylation in the patient; and

15 (d) comparing the corresponding levels of phospholipid
methylation from steps (a) and (c), wherein an increase in
the level of phospholipid methylation subsequent to
administration of the therapeutic process or agent indicates
that the therapeutic process or agent is effective for
treating said patient.

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2. The method of claim 1, wherein the determination of
the level of phospholipid methylation is carried out by
labelling of the methylfolate pool.

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3. The method of claim 2, wherein the level of
phospholipid methylation is determined by labelling the
methylfolate pool with [¹⁴C]-formic acid.

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4. The method of claim 1, wherein steps (b), (c) and
(d) are carried out more than once.

5. A method of identifying a therapeutic process or
agent for treating schizophrenia or a related
neuropsychiatric disorder, comprising the steps of:

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(a) establishing an assay system comprising a cultured

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cell line, said cultured cell line either naturally expressing D₄ receptors or transfected with the D₄ receptor gene;

(b) making an initial determination of the level of phospholipid methylation in cells of said cell line;

(c) administering to cells of said cell line the candidate therapeutic process or agent to be assessed;

(d) making a subsequent determination of the level of phospholipid methylation in cells of said cell line; and

(e) comparing the corresponding levels of phospholipid methylation from steps (b) and (d), wherein an increase in the level of phospholipid methylation subsequent to administration of the candidate therapeutic process or agent indicates that the candidate process or agent is potentially therapeutically effective for treating schizophrenia or a related neuropsychiatric disorder.

6. The method of claim 5, further including, prior to step (e), the step of determining the level of phospholipid methylation in the presence or absence of added D₄ receptor agonists and/or antagonists.

7. The method of claim 5, wherein the determination of the level of phospholipid methylation is carried out by labelling of the methylfolate pool.

8. The method of claim 6, wherein the level of phospholipid methylation is determined by labelling the methylfolate pool with [¹⁴C]-formic acid.

9. The method of claim 5, wherein steps (c), (d) and (e) are carried out more than once.